CLAIMS

1. A method of encoding a URL in sound, wherein the characters of the URL are mapped to sound features in a sound output, the nature of the sound features and of the mapping between characters and sound features being such that at least certain character combinations that occur frequently in URLs produce sound sequences of a musical character.

2. A method according to claim 1, wherein the characters of the URL are mapped to produce sound codewords each of which is used to produce, in a sound output, a sound feature corresponding to that codeword.

3. A method according to claim 1, wherein the sound features comprise fixed-frequency tones or tone combinations.

4. A method according to claim 1, wherein the sound features comprise occurrence of maximum sound output power in predetermined frequency bands.

5. A method according to claim 1, wherein the sound features comprise changes in output frequency;

6. A method according to claim 1, wherein the sound features comprise different modulation frequencies of one or more tones.

7. A method according to claim 2, wherein characters of the URL are taken in groups of a first number of characters to form a second number of sound codewords, said second number being different from said first number.

8. A method according to claim 7, wherein three characters each represented by eight bits are used to form four six-bit sound codewords.

9. A method according to claim 1, wherein the generic top-level domain names encode to sound sequences of a musical character.

10. A method according to claim 1, wherein at least one URL encodes in its entirety to a sound sequence of a musical character.

11. A method of decoding a sound sequence into a URL, wherein sound features of the sound sequence are mapped to characters of the URL, the nature of the sound features and of the mapping between sound features and characters being such that sound sequences of a musical character represent at least certain character combinations that occur frequently in URLs.

12. A method according to claim 11, wherein each sound feature is mapped to a corresponding sound codeword, the sound codewords being used to produce the characters of the URL.

13. A method according to claim 11, wherein the sound features comprise fixed-frequency tones or tone combinations.

14. A method according to claim 11, wherein the sound features comprise occurrence of maximum sound output power in predetermined frequency bands.

15. A method according to claim 11, wherein the sound features comprise changes in output frequency;

16. A method according to claim 11, wherein the sound features comprise different modulation frequencies of one or more tones.

17. A method according to claim 12, wherein sound codewords derived from the sound features are taken in groups of a second number of codewords to form a first number of characters of the URL, said second number being different from said first number.

18. A method according to claim 17, wherein four six-bit sound codewords are used to form three characters each represented by eight bits.

19. A method according to claim 11, wherein said at least certain character combinations comprises the generic top-level domain names.

20. A method according to claim 11, wherein said at least certain character combinations includes at least one URL in its entirety.

21. Apparatus for encoding a URL in sound, the apparatus comprising a translator for mapping characters of the URL to sound features in a sound output, the nature of the sound features and of the mapping between characters and sound features being such that at least certain character combinations that occur frequently in URLs produce sound sequences of a musical character.

22. Apparatus according to claim 21, wherein the translator comprises conversion means for mapping the characters of the URL to sound codewords, and means for using each codeword to produce, in a sound output, a sound feature corresponding to that codeword.

23. Apparatus according to claim 21, wherein the sound features comprise fixed-frequency tones or tone combinations.

24. Apparatus according to claim 21, wherein the sound features comprise occurrence of maximum sound output power in predetermined frequency bands.

25. Apparatus according to claim 21, wherein the sound features comprise changes in output frequency;

26. Apparatus according to claim 21, wherein the sound features comprise different modulation frequencies of one or more tones.

27. Apparatus according to claim 22, wherein the conversion means is operative to take characters of the URL in groups of a first number of characters to form a second number of sound codewords, said second number being different from said first number.

5   **28.** Apparatus according to claim 22, wherein the conversion means is operative to take characters, each represented by eight bits, in groups of three to form, from each group, four six-bit sound codewords.

29. Apparatus according to claim 21, wherein the translator is arranged to encode generic
10 top-level domain names to sound sequences of a musical character.

30. Apparatus according to claims 21, wherein the translator is arranged to encode at least one URL in its entirety to a sound sequence of a musical character.

15   **31.** Apparatus for decoding a sound sequence into a URL, the apparatus comprising a translator for mapping sound features of the sound sequence to characters of the URL, the nature of the sound features and of the mapping between sound features and characters being such that sound sequences of a musical character represent at least certain character combinations that occur frequently in URLs.

20

32. Apparatus according to claim 31, wherein the translator comprises means for mapping each sound feature to a corresponding sound codeword, and conversion means for using the sound codewords to produce the characters of the URL.

25   **33.** Apparatus according to claim 31, wherein the sound features comprise fixed-frequency tones or tone combinations.

34. Apparatus according to claim 31, wherein the sound features comprise occurrence of maximum sound output power in predetermined frequency bands.

30

35. Apparatus according to claim 31, wherein the sound features comprise changes in output frequency;

36. Apparatus according to claim 31, wherein the sound features comprise different modulation frequencies of one or more tones.

5 **37.** Apparatus according to claim 32, wherein the conversion means is operative to take sound codewords in groups of a second number of codewords to form a first number of characters of the URL, said second number being different from said first number.

38. Apparatus according to claim 32, wherein the conversion means is operative to take
10 six-bit sound codewords in groups of four to form, from each group, three characters each represented by eight bits.

39. Apparatus according to claim 31, wherein the said at least certain character combinations comprises the generic top-level domain names.
15
40. Apparatus according to claim 31, wherein said at least certain character combinations includes at least one URL in its entirety.